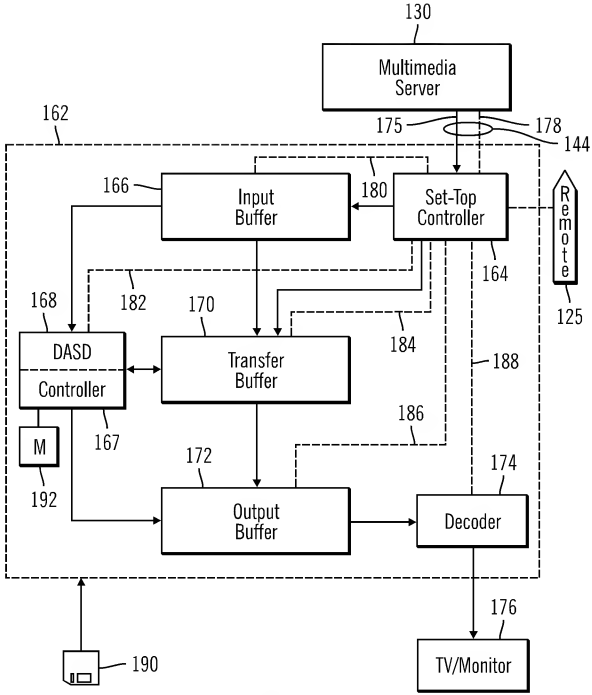

130
Multimedia Server
162
175
178
144
166
Input Buffer
180
Set-Top Controller
Remote
164
125
168
182
170
184
DASD
Controller
Transfer Buffer
188
186
M
167
172
174
192
Output Buffer
Decoder
176
190
TV/Monitor

FIG. 1

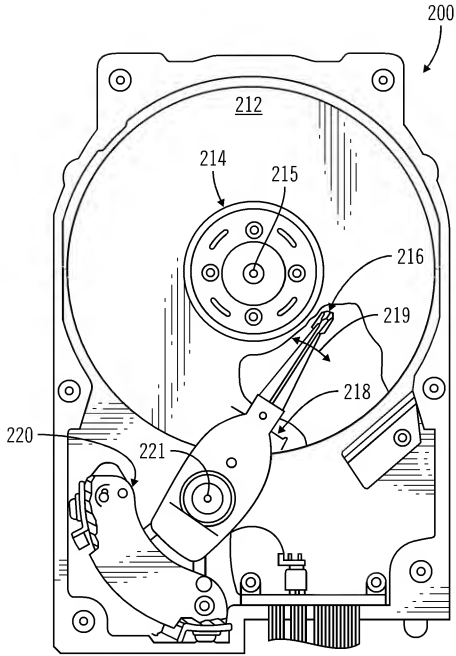


FIG. 2

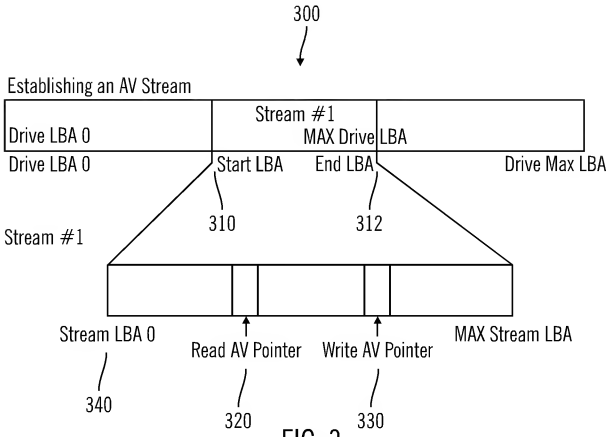

300
Establishing an AV Stream
Stream #1
Drive LBA 0
MAX Drive LBA
Drive LBA 0
Start LBA
End LBA
Drive Max LBA
310
312
Stream #1
Stream LBA 0
Read AV Pointer
Write AV Pointer
MAX Stream LBA
340
320
330

FIG. 3

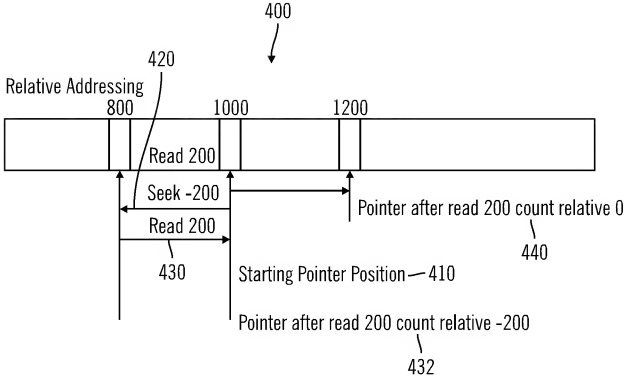

400
420
Relative Addressing
800
1000
1200
Read 200
Seek -200
Pointer after read 200 count relative 0
Read 200
440
430
Starting Pointer Position
410
Pointer after read 200 count relative -200
432

FIG. 4

	510 Feature Register value	520 Feature Description (530)
	0Bh	Enable AV Stream mode
	0Ch	Enable Read Continuous operation
	0Dh	Enable Time-base ERP Limitation for Read
	0Eh	Enable Time-base ERP Limitation for Write
550	0Fh	Enable AV Write Cache
540	8Bh	Disable AV Stream mode
542	8Ch	Disable Read Continuous operation
544	8Dh	Disable Time-base ERP Limitation for Read
546	8Eh	Disable Time-base ERP Limitation for Write
548	8Fh	Disable AV Write Cache

FIG. 5

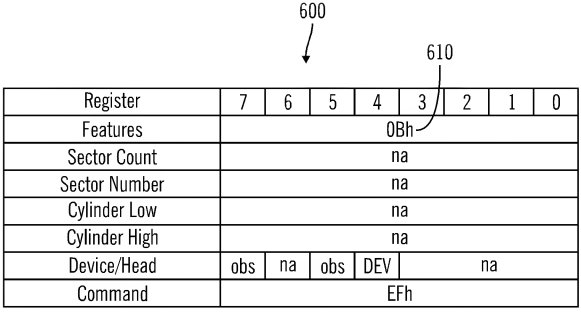

600
610
Register
7
6
5
4
3
2
1
0
Features
0Bh
Sector Count
na
Sector Number
na
Cylinder Low
na
Cylinder High
na
Device/Head
obs
na
obs
DEV
na
Command
EFh

FIG. 6

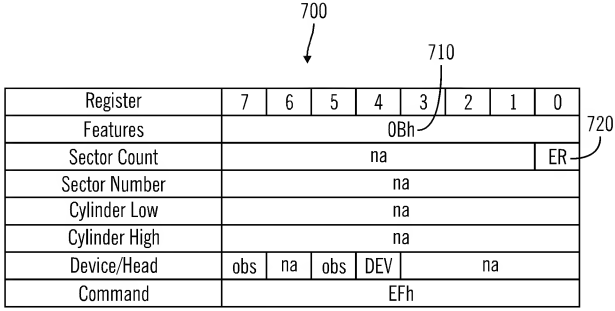

700
710
720
Register
7
6
5
4
3
2
1
0
Features
0Bh
Sector Count
na
ER
Sector Number
na
Cylinder Low
na
Cylinder High
na
Device/Head
obs
na
obs
DEV
na
Command
EFh

FIG. 7

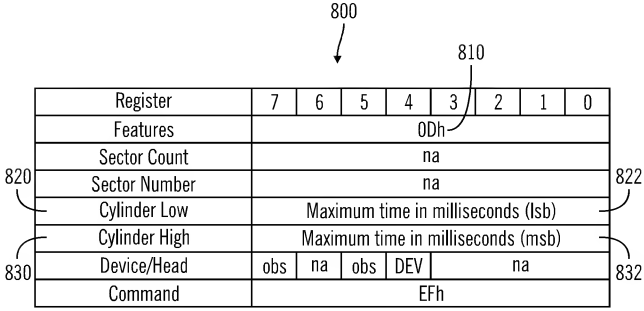

800
810
Register
7
6
5
4
3
2
1
0
Features
0Dh
Sector Count
na
820
Sector Number
na
822
Cylinder Low
Maximum time in milliseconds (lsb)
Cylinder High
Maximum time in milliseconds (msb)
830
Device/Head
obs
na
obs
DEV
na
832
Command
EFh

FIG. 8

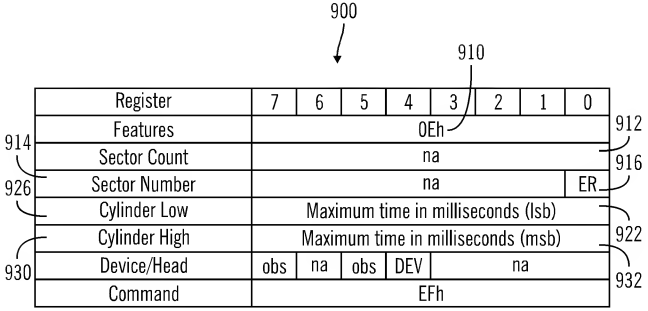
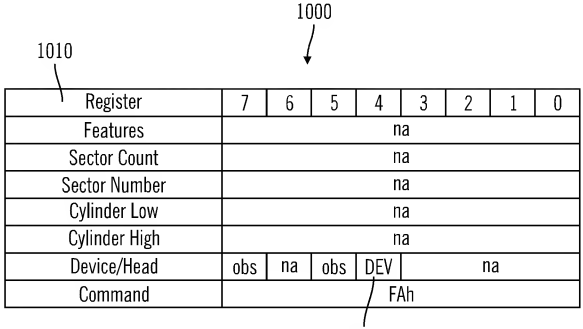
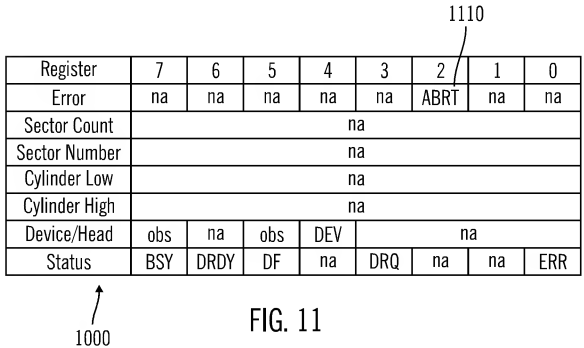

900
910
Register
7
6
5
4
3
2
1
0
Features
0Eh
912
914
Sector Count
na
916
926
Sector Number
na
ER
Cylinder Low
Maximum time in milliseconds (lsb)
Cylinder High
Maximum time in milliseconds (msb)
922
930
Device/Head
obs
na
obs
DEV
na
932
Command
EFh

FIG. 9



Register	7	6	5	4	3	2	1	0
Features	na							
Sector Count	na							
Sector Number	na							
Cylinder Low	na							
Cylinder High	na							
Device/Head	obs	na	obs	DEV	na			
Command	FAh							

FIG. 10



Register	7	6	5	4	3	2	1	0
Error	na	na	na	na	na	ABRT	na	na
Sector Count	na							
Sector Number	na							
Cylinder Low	na							
Cylinder High	na							
Device/Head	obs	na	obs	DEV	na			
Status	BSY	DRDY	DF	na	DRQ	na	na	ERR

FIG. 11

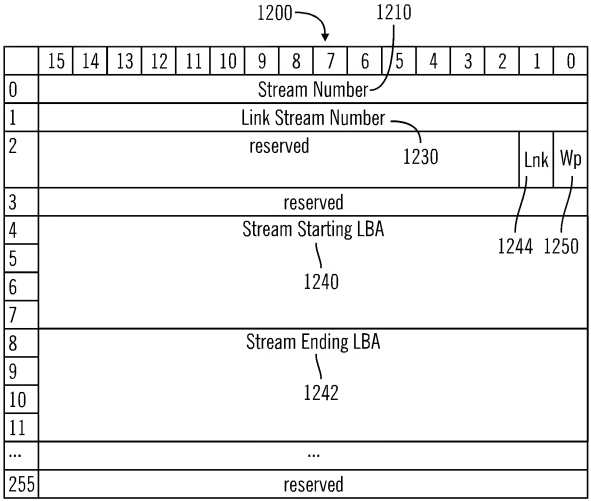

1200
1210
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
0
Stream Number
1
Link Stream Number
2
reserved
1230
Lnk
Wp
3
reserved
4
5
6
7
Stream Starting LBA
1240
1244
1250
8
9
10
11
Stream Ending LBA
1242
...
...
255
reserved

FIG. 12

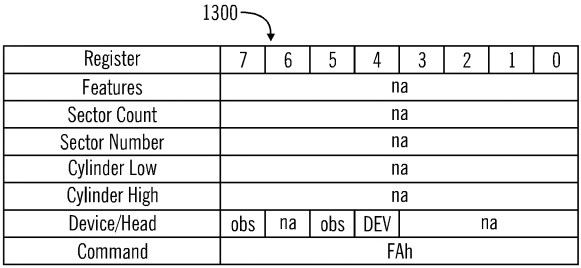

1300
Register
7 6 5 4 3 2 1 0
Features
na
Sector Count
na
Sector Number
na
Cylinder Low
na
Cylinder High
na
Device/Head
obs na obs DEV na
Command
FAh

FIG. 13

1400 1410

Register	7	6	5	4	3	2	1	0
Error	na	na	na	na	na	ABRT	na	na
Sector Count	na							
Sector Number	na							
Cylinder Low	na							
Cylinder High	na							
Device/Head	obs	na	obs	DEV	na			
Status	BSY	DRDY	DF	na	DRQ	na	na	ERR

FIG. 14

1500 1520

Register	7	6	5	4	3	2	1	0
Features	AV Stream Number							
Sector Count	na							
Sector Number	na							
Cylinder Low	na							
Cylinder High	na							
Device/Head	obs	na	obs	DEV	na			
Command	FCh							

1510

FIG. 15

1600

Register	7	6	5	4	3	2	1	0
Error	na	na	na	na	na	ABRT	na	na
Sector Count	na							
Sector Number	na							
Cylinder Low	na							
Cylinder High	na							
Device/Head	obs	na	obs	DEV	na			
Status	BSY	DRDY	DF	na	DRQ	na	na	ERR

FIG. 16

1700 1710

Register	7	6	5	4	3	2	1	0
Error	na	na	na	na	na	ABRT	na	na
Sector Count	na							
Sector Number	na							
Cylinder Low	na							
Cylinder High	na							
Device/Head	obs	na	obs	DEV	na			
Status	BSY	DRDY	DF	na	DRQ	na	na	ERR

FIG. 17

1820

Register	7	6	5	4	3	2	1	0
Features	AV Stream Number							
Sector Count	Function Code							
Sector Number	LBA							
Cylinder Low	LBA							
Cylinder High	LBA							
Device/Head	obs	LBA	obs	DEV	LBA			
Command	C3h							

1824 1822

FIG. 18

1900 1920

Value in Sector Count	Action
0	Set the Read AV Pointer
1	Set the Write AV Pointer
2	Return the Read AV Pointer
3	Return the Write AV Pointer
4-255	Reserved

1910 1908

FIG. 19

2000

Register	7	6	5	4	3	2	1	0
Error	Stream Number							
Sector Count	Function Code							
Sector Number	LBA							
Cylinder Low	LBA							
Cylinder High	LBA							
Device/Head	obs	LBA	obs	DEV	LBA			
Status	BSY	DRDY	DF	na	DRQ	na	na	ERR

FIG. 20

2100

Register	7	6	5	4	3	2	1	0
Error	na	na	na	na	na	ABRT	na	na
Sector Count	na							
Sector Number	na							
Cylinder Low	na							
Cylinder High	na							
Device/Head	obs	na	obs	DEV	na			
Status	BSY	DRDY	DF	na	DRQ	na	na	ERR

FIG. 21

2200

Register	7	6	5	4	3	2	1	0	
Features	AV Stream Number								2220
Sector Count	Sector count								
Sector Number	Relative Address								
Cylinder Low	Relative Address								
Cylinder High	Relative Address								
Device/Head	obs	LBA	obs	DEV	Relative Address				2240
Command	CEh								2210

2230

FIG. 22

2300

Register	7	6	5	4	3	2	1	0
Error	na							
Sector Count	na							
Sector Number	LBA							
Cylinder Low	LBA							
Cylinder High	LBA							
Device/Head	obs	na	obs	DEV	LBA			
Status	BSY	DRDY	DF	na	DRQ	na	PP	ERR

2310

FIG. 23

2400

Register	7	6	5	4	3	2	1	0
Error	ICRC	WP	MC	IDNF	MCR	ABRT	NM	na
Sector Count	na							
Sector Number	na							
Cylinder Low	na							
Cylinder High	na							
Device/Head	obs	na	obs	DEV	na			
Status	BSY	DRDY	DF	na	DRQ	na	na	ERR

FIG. 24

2500

Register	7	6	5	4	3	2	1	0	
Features	AV Stream Number								2520
Sector Count	Sector count								
Sector Number	Relative Address								
Cylinder Low	Relative Address								
Cylinder High	Relative Address								
Device/Head	obs	LBA	obs	DEV	Relative Address				2540
Command	CFh								2510

2530

FIG. 25

2600

Register	7	6	5	4	3	2	1	0
Error	na							
Sector Count	na							
Sector Number	na							
Cylinder Low	na							
Cylinder High	na							
Device/Head	obs	na	obs	DEV	na			
Status	BSY	DRDY	DF	PP	DRQ	na	na	ERR

2610

FIG. 26

2700 2710

Register	7	6	5	4	3	2	1	0
Error	ICRC	WP	MC	IDNF	MCR	ABRT	NM	DFER
Sector Count	na							
Sector Number	LBA							
Cylinder Low	LBA							
Cylinder High	LBA							
Device/Head	obs	na	obs	DEV	LBA			
Status	BSY	DRDY	DF	na	DRQ	na	na	ERR

FIG. 27

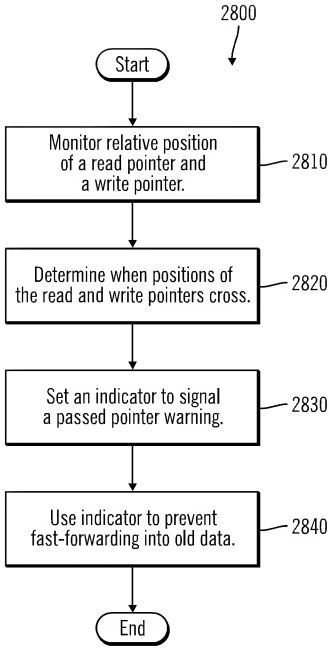

2800
Start
Monitor relative position of a read pointer and a write pointer.
2810
Determine when positions of the read and write pointers cross.
2820
Set an indicator to signal a passed pointer warning.
2830
Use indicator to prevent fast-forwarding into old data.
2840
End

FIG. 28